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XLII.—*Report on a Collection of Fishes from Newchwang, North China.* By Dr. A. GÜNTHER, F.R.S.

[Plate XIII.]

DR. W. MORRISON, who, after a long residence at Newchwang in Manchuria, has recently returned home, has brought a small collection of well-preserved specimens of fishes which are usually sold in the market for food. They are caught in the river and estuary of the Liao-ho, and are the first which are described from that river. The number of species is twenty-two, nearly all of which are known to occur also in the waters of the southern coast of the Gulf of Pechelee and in the rivers still further south. On the other hand, although the tributaries of the Liao-ho are separated from those of the Amur by a watershed in places under a mile in breadth, the fish-faunas of these two systems seem to be very different, to judge from Dybowsky's descriptions of the Amur fishes. No Salmonoids from the Liao-ho were ever seen by Dr. Morrison; those sold at Newchwang (and they were in large quantities) came from the Amur.

Another point of interest attached to this collection was that it contained species evidently seen and figured by Basilewsky, who obtained the materials for his paper in *Nouv. Mém. Soc. Impér. Nat. Moscou, 1855*, chiefly at Pekin, *Ann. & Mag. N. Hist. Ser. 7. Vol. i.* 20

where immense quantities of fishes are imported in a frozen state from the coast as well as from Mongolian and Manchurian rivers.

Lateolabrax japonicus, Schleg.

Chinese: *Lu-yu*.

Labrax ly-iuy (Basilewsky, N. Mém. Soc. Imp. Nat. Mosc. x. 1855, p. 219) is evidently the same fish as the one first described from Japanese specimens. Basilewsky, indeed, speaks of denticulations on the tongue—" *Lingua libera ad basin aspera denticulata* "; but this remark clearly refers merely to the asperities behind the tongue, on the basi-branchials.

Sciæna tenlo.

Sciæna tenlo, Basil. Nouv. Mém. Soc. Imp. Nat. Moscou, x. 1855, p. 220, tab. iii. fig. 1 (erroneously named *Pagrus magrocephalus*).

D. 10 | $\frac{1}{26-30}$. A. 2/7. L. lat. ca. 70*. L. transv. 7/20.

The length of the head is nearly equal to the height of the body, which is contained $3\frac{1}{5}$ times in the total length (without caudal). The diameter of the eye is two elevenths of the length of the head, less than the length of the snout, and much less than the width of the interorbital space. Snout moderately swollen, overlapping the lower jaw, which shows five distinct symphyseal pits. Maxillary extending beyond the middle of the eye. Præopercular margin armed with spines. Dorsal spines slender, moderately long. Anal spine strong, two thirds of longest ray. Caudal fin obtusely rounded. Pectoral fins longer than ventral, two thirds of the length of the head. Oblique greyish lines running along the series of scales; spinous dorsal fin blackish; each dorsal ray with a black spot at the base.

The specimen in Dr. Morrison's collection, about 20 inches long, is well preserved, and agrees so well with Basilewsky's figure that the latter might have been drawn from it. The Chinese name, *T'ung-lo-yu*, as given by Dr. Morrison, agrees likewise with that mentioned by Basilewsky. There is an unfortunate confusion in the lettering of the illustrations in the Russian memoir. The actual lettering of our fish is "*Pagrus magrocephalus*, tab. iii. fig. 1," while the name

* The scales along the lateral line are very irregular; I have endeavoured to indicate by this figure the number of transverse rows of scales above the lateral line.

belonging to our fish is transposed to the species of "*Pagrus*" on tab. i. fig. 3.

This species of *Sciæna* is allied to *Sciæna coitor*, to which I referred some young and badly preserved specimens from Reeves's collection in 1860 (Cat. Fish. ii. p. 301); but, for the present at least, both forms had better be kept distinct. Materials such as were at that time at my disposal, and, I believe, at that of my predecessors, are quite insufficient for a critical delimitation of the species in a family in which the species are so closely allied and so indistinctly described as in the *Sciænidæ*.

Also a very young specimen in a bad state of preservation, sent by Swinhoe from Chefoo, which I thought might be referred to *Sciæna Dussumieri* (Ann. & Mag. Nat. Hist., Feb. 1874, p. 155), seems to belong rather to *Sciæna tenlo*.

Sciæna crocea.

Sciæna crocea, Richardson, Ichthyol. China and Japan, p. 224 (1846); Günth. Cat. Fish, ii. p. 284.

Sciæna chuan-chua, Basilewsky, Nouv. Mém. Soc. Imp. Nat. Mosc. x. 1855, p. 221.

D. 10 | $\frac{1}{33-34}$. A. 2/7. L. lat. 63. L. transv. 5/14.

The height of the body is nearly the length of the head, which is two sevenths of the total length (without caudal). The diameter of the eye is two elevenths of the length of the head, less than that of the snout, and much less than the width of the interorbital space. Snout scarcely swollen, with the lower jaw a little projecting, approaching in form that of *Otolithus*. The teeth in the upper jaw are short, forming a single series, no one being differentiated by size, but they are larger than those of the lower jaw. Lower jaw without pits. The maxillary does not extend to below the hind margin of the orbit. Præopercular margin membranaceous, with indistinct crenulations. Dorsal spines feeble; anal spine short, but pungent. Caudal fin slightly produced in the middle. Pectoral fins longer than ventral and as long as head without snout. Coloration uniform silvery.

The specimens from which this description is taken are 12 inches long. Dr. Morrison enumerates them under the names of *Huang hua yu* and *Huang liu yu*, of which, although somewhat differently spelled, the former agrees with the vernacular names given by Reeves and Basilewsky.

Collichthys lucida, Rich.

A young specimen.

Vernacular name : *Ta tou pao yu*.

Cybiium gracile.

Cybiium gracile, Günth. Ann. & Mag. Nat. Hist., Nov. 1873, p. 378.

First described from Chefoo.

Vernacular name : *Pa-yu*.

Platycephalus cultellatus, Rich.

Vernacular name : *Chien tou yu*.

Gobius hasta, Schleg.

Vernacular name : *Pan tou yu*.

Mugil so-iuy.

Vernacular name : *So-yu*.

Mugil so-iuy, Basilewsky, Nouv. Mém. Imp. Soc. Nat. Moscou, x. 1855, p. 226, tab. iv. fig. 3; Günth. Ann. & Mag. Nat. Hist., Feb. 1874, p. 157.

D. 4 | $\frac{1}{8}$. A. $\frac{3}{8}$. L. lat. 41. L. transv. 14.

Allied to *Mugil axillaris*.

The height of the body is contained in the total length (without caudal) $5\frac{1}{3}$ times, the length of the head $4\frac{2}{3}$. The diameter of the eye is contained in the length of the head $5\frac{1}{2}$ times, the width of the interorbital space $2\frac{1}{2}$. Adipose eyelid not developed; the præorbital is emarginate and distinctly denticulated; snout longer than the orbit; upper lip thin; extremity of the maxillary not hidden. There are twenty-three scales between the snout and the first dorsal fin; no elongate scale in the axil. Dorsal fins nearly equal in height; the spines are rather slender, and the first is rather shorter than the postorbital portion of the head; its root is a little nearer to the snout than to the base of the caudal fin. Neither the dorsal nor the anal fins are scaly, the latter commences distinctly in advance of the soft dorsal. Caudal emarginate. Pectoral as long as the head, without snout. Coloration uniform.

The specimen from which this description is taken is 11 inches long. Basilewsky's figure is incorrect in many respects, especially as regards the position of the first dorsal

fin. He mentions the eyes as "*nictitantes*"; but this seems to refer merely to the circular eyelid, which covers only the margin of the orbit, as also shown in the figure.

Cynoglossus semilævis.

Cynoglossus semilævis, Günth. Ann. & Mag. Nat. Hist., Nov. 1873, p. 379.

Vernacular name: *Ta ta-pan yu.*

The specimen, 16 inches long, differs somewhat from the type; I count 124 rays in the dorsal and 98 in the anal fin; 23 rows of scales between the upper and middle, and 28 between the middle and lower lateral lines. No spots on the blind side.

Cynoglossus gracilis.

Cynoglossus gracilis, Günth. Ann. & Mag. Nat. Hist., Sept. 1873, p. 244.

Vernacular name: *Hsiao ta-pan yu.*

Also in this specimen, which is 11 inches long, the numbers of the fin-rays and scales vary slightly from the type, the dorsal fin showing 136 rays and the anal 102; l. lat. 165. 21 rows of scales between upper and middle and 28 between middle and lower lateral lines.

Silurus asotus, L.

Vernacular name: *Lien yu.*

Macrones longirostris.

Macrones longirostris, Günth. Ann. & Mag. Nat. Hist., Sept. 1873, p. 245.

Vernacular name: *Hui wang yu.*

Macrones Vachellii.

Bagrus (?) *Vachellii*, Richards. Ichth. China and Japan, p. 284.

Silurus calvarius, Basilewsky, Nouv. Mém. Soc. Imp. Nat. Mosc. x. 1855, p. 241, pl. ix. fig. 1.

Pseudobagrus Vachellii, Günth. Fish. v. p. 85.

Vernacular name: *Ko ya tzu yu.*

Formerly I was inclined to refer *S. calvarius*, Basil., to *Macrones fulvidraco*, but that name, I have now no doubt, was intended for the present species.

Cyprinus carpio, L.

Vernacular name: *Li yu.*

Hypophthalmichthys molitrix, C. V.

Vernacular name: *Chiang pan tou yu*.

Opsariichthys Morrisonii, sp. n. (Pl. XIII. fig. A.)

D. 10. A. 10. L. lat. 48. L. transv. 9/5.

Head compressed, deep, its depth being two thirds of its length. The eye is immediately below the upper profile, distant more than two diameters from the angle of the mouth; it is small, one seventh of the length of the head, and two fifths of that of the snout. Interorbital space flat, $2\frac{1}{2}$ times as wide as the orbit. Mouth wide, the maxillary extending to below the middle of the eye. The end of the lower jaw is received in a notch of the upper, and has on each side in front a notch to receive a strong projection of the upper jaw. The third, fourth, and fifth anal rays are prolonged into a lobe which reaches the base of the caudal. Origin of the dorsal opposite to that of the ventral, but only very little nearer to the root of the caudal than to the end of the snout. Caudal deeply forked. The pectoral does not extend to the ventral. The depth of the body and the length of the head are a little more than one fourth of the total length (without caudal). Suborbital ring broad, its width below the orbit being equal to that of the orbit. Silvery.

The specimen is 9 inches long, fully mature, and was caught during the breeding-season, the lower jaw and other parts of the head being beset with small dermal tubercles. The species is allied to *O. bidens*, and bears the Chinese name of *Pai-ku yu*. For comparison the latter species is figured on Pl. XIII. fig. B; it has been described in Ann. & Mag. Nat. Hist., Sept. 1873, p. 249.

Culter erythropterus.

Vernacular name: *Pai yu*.

Culter erythropterus, Basil. Nouv. Mém. Soc. Imp. Nat. Mosc. x. 1855, p. 236, tab. viii. fig. 1; Günth. Fish. vii. p. 328.

Culter ilishceformis, Bleek. Nat. Verh. Ak. Wet. xii.; Cyprin. Chin. p. 67, tab. x. fig. 1; Günth. Ann. & Mag. Nat. Hist., Sept. 1889, p. 227.

Culter Sieboldii, Dybowski, Verh. zool.-bot. Ges. Wien, xxii. 1872, p. 214 (is probably the same fish).

Having now had the opportunity of comparing a specimen from Northern China with others from the Yangtsekiang, I have convinced myself of their specific identity. Bleeker's first description in Ned. Tijdschr. Dierk. ii. p. 27, was faulty.

Culter Sieboldii, from the Amur, seems to me to be the same fish.

Coilia nasus, Schleg.

Vernacular name: *Tao yu*.

It may appear doubtful whether Basilewsky's *Osteoglossum prionostoma* should be referred to this species or to *Coilia clupeioides*.

Chatoëssus punctatus, Schleg.

Vernacular name: *Hai chi yu*.

Harpodon nehereus, H. B.

Vernacular name: *Mien tiao yu*.

Anguilla bostoniensis, Les.

Vernacular name: *Shan yu*.

The eel in Dr. Morrison's collection shows the technical characters of the form "*bostoniensis*," although also *Anguilla vulgaris* and *A. mauritanica* have been brought from China. It will always be doubtful to which of these forms Basilewsky's *A. pekinensis* should be referred.

Trygon, sp.

A young specimen, without tail.

Vernacular name: *Yang yu*.

EXPLANATION OF PLATE XIII.

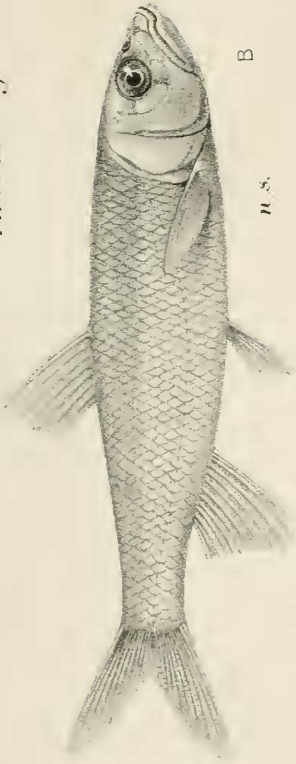
Fig. A. *Opsariichthys Morrisonii*.

Fig. B. — *bidens*.

XLIII.—*Notes on the Physical Aspects and on the Food-Fishes of the Liao Basin, North China.* By W. MORRISON, M.D.

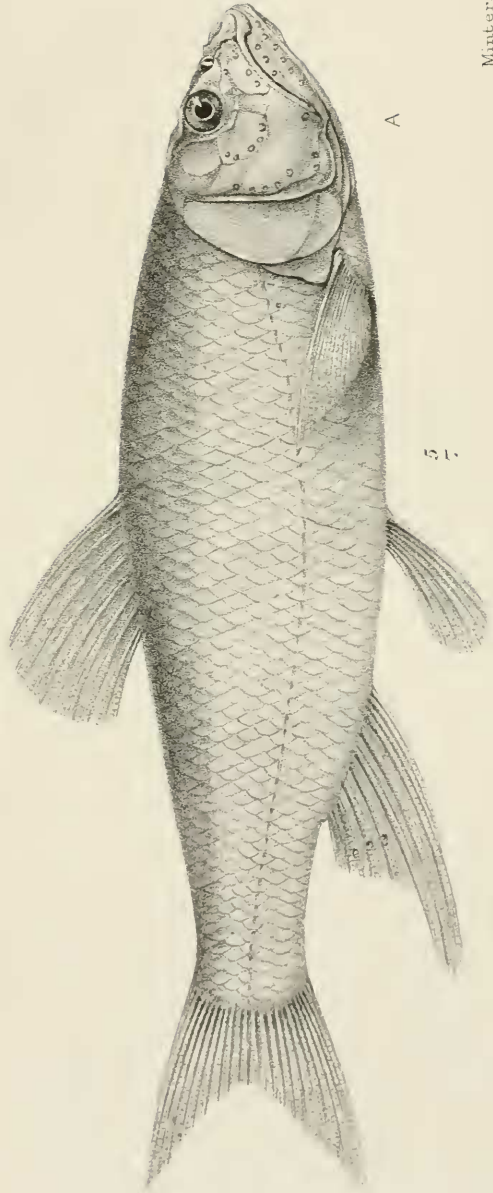
AT the request of Dr. Günther I offer herewith a few notes, supplementary to the preceding paper, on the physical aspects of the Liao basin and on the food-fishes of Newchwang, some of which are not included in the collection made for me by H.M. Consul, Mr. A. Hosie, and described by Dr. Günther.

The chief source of the Liao River is in Mongolia, near the southern termination of the Kinghan range of mountains, in lat. 43° 30' N. and long. 118° E. During its course



B

n. s.



A

n. s.